

9 California Corbina, *Menticirrhus undulatus*



California corbina, *Menticirrhus undulatus*. Photo credit: B Varney

History of the Fishery

The California corbina (*Menticirrhus undulatus*), also known as California king croaker or California whiting, is one of several species of croakers (family Sciaenidae) that inhabit the nearshore coastal waters of southern California. Fishing for corbina has remained a strictly recreational activity ever since the commercial fishery in California was shut down in 1915, though corbina can still be found in the commercial markets of Mexico. This fish is very popular with southern California anglers in part because of how challenging it is to catch one. They also put up a good fight and are good eating.

Fishing for corbina occurs year round, but the best fishing is in the summer and early fall. Corbina can be taken along sandy beaches, and off piers and jetties. According to California Recreational Fisheries Survey (CRFS) data, about 99 percent of the catch was estimated to come from shore modes, which includes beach and bank (BB) and manmade (MM) modes; corbina are rarely caught from the boat modes, including private/rental boats, and party/charter boats. Average annual catch estimates from 2004-2009 suggest this species is caught equally as often from beaches and banks as from a pier or jetty. CRFS reduced sampling levels for the BB mode in 2010 and BB and MM in 2011; therefore, the estimates for 2010 and 2011 are not comparable with the 2004-2009 estimates.

Estimates of recreational catch were generated by the Marine Recreational Fisheries Statistics Survey (MRFSS) from 1981 to 1989 and from 1993 to 2003. From 2004 to the present, catch estimates are produced by CRFS, which benefits from an improved sampling design. Both surveys rely on an angler-intercept method to determine species composition and catch rates, coupled with a telephone survey to estimate fishing effort. Though similar methodology in general was used for each, the two sampling designs are sufficiently different that catch estimates generated from MRFSS and CRFS are not considered comparable and will be provided in separate graphs and tables below.

The annual number of corbina caught by recreational anglers has been variable, with Marine Recreational Fisheries Statistics Survey (MRFSS) annual catch estimates for 1980-2003 ranged between a high of 53,000 fish in 1987 and a low of 2,000 fish in 2003, averaging 24,000 fish annually (Figure 9-1).

The CRFS annual catch estimates for 2004-2009 ranged between 5,800 and 38,000 fish in 2008 and 2006, respectively, with an average of 23,000 fish (Figure 9-2). Both surveys show a downward trend in catch over time. Some studies suggest that this trend, which is also characteristic of the majority of sciaenids in southern California, may be attributed to environmental factors such as changing sea surface temperatures and plankton biomass.

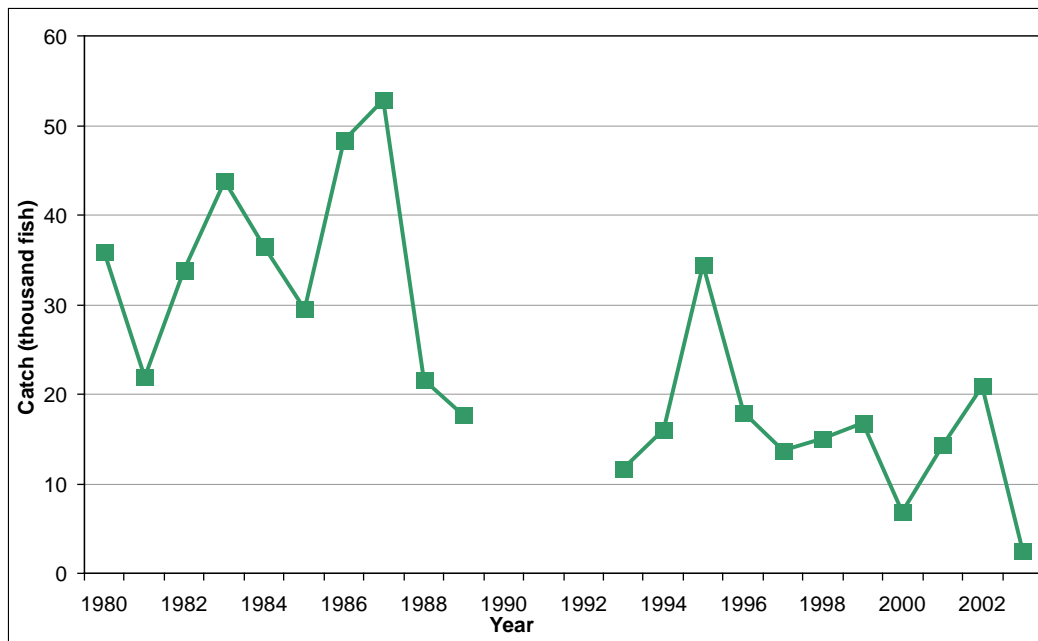


Figure 9-1. California corbina recreational catch, 1980-2003. Data source: MRFSS data, all fishing modes and gear types combined. Data for 1990-1992 are not available.

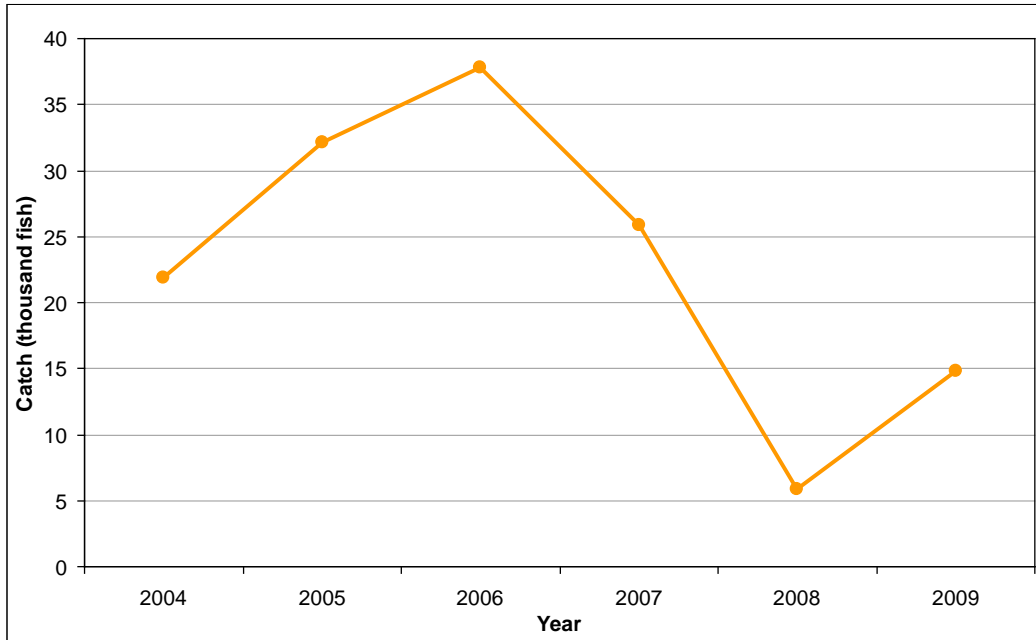


Figure 9-2. California corbina recreational catch, 2004-2009. Data source: CRFS data, all fishing modes and gear types combined. Data for 2010-2011 are not available.

Status of Biological Knowledge

The California corbina are a slender croaker with a gray to bluish back and a white flattened belly. They have a short, stiff chin barbell and may have wavy oblique lines on their sides. Corbina range from Point Conception, California to the Gulf of California, Mexico. They can be found along sandy beaches and inside shallow bays in water anywhere from a few inches deep to 66 feet (20 meters), but are most commonly found shallower than 40 feet (12 meters). Corbina are usually solitary or in small loose groups, but occasionally occur in very large schools.

Corbina can grow to 30 inches (76 centimeters) and weigh up to 8.5 pounds (3.6 kilograms); the official sportfishing record for a corbina caught using hook-and-line is 7 pounds, 1 ounce (3.2 kilograms) and 24.5 inches (62 centimeters) total length. The oldest corbina sampled was a 23 inch (58 centimeter) female caught on the open coast that was estimated to be 11 years old. Spawning season takes place from April to October with peak activity occurring from June through August. The eggs are pelagic and fish that are only 1.5-3 inches long (40-76 millimeters) have been collected in the surf zone to 30 feet (9 meters) deep.

The California corbina feeds primarily on benthic organisms. Individuals may be seen foraging in the very shallow waters of the surf zone - waters so shallow in fact that their backs are exposed. They feed by scooping up mouthfuls of sand and filtering the contents through their gill openings. Juveniles mainly consume clam siphons and small crustaceans, moving on to larger parts of clams and sand crabs as they grow. Because of its benthic feeding habits, corbina is exposed to contaminants in the sand and mud.

One Newport Bay study found corbina samples containing concentrations of DDTs and PCBs above the screening value for human fish consumption. Therefore, current health guidelines advise against eating more than 2 servings per week of California corbina caught from southern California waters between Ventura Harbor and San Mateo Point, just south of San Clemente.

Limited tagging studies suggest that corbina tend to be mainly sedentary and do not display any discernable migratory pattern. The greatest distance any tagged corbina has been known to travel is 51 miles (82 kilometers). Some studies indicate there may be some seasonal inshore-offshore movement. One study that analyzed entrainment data from several southern California power generating stations for 1977-1998 noticed that corbina densities were highest from January through March. The intakes for these stations were located offshore and in midwater depths between 13 and 20 feet (4 and 6 meters). Other studies looking at recreational catch data collected in the surf zone showed higher densities in the summer months and early fall. These data suggest corbina may move offshore in the winter months and move inshore in the summer months.

Status of the Population

Recruitment, population size, and mortality of California corbina are unknown. California Department of Fish and Wildlife (Department) beach seine hauls along the open coast in southern California from 2007 through 2009 yielded slightly higher but similar numbers of corbina to those obtained during two other previous similar Department studies from 1994-1997 and 1953-1956. These three studies also yielded similar catch-per-unit efforts, indicating that the population is sustaining itself under present recreational harvest levels.

California corbina ranked sixth in abundance during the most recent Department beach seine study (2007-2009), below other common surf fish species such as queenfish, yellowfin croaker, and walleye surfperch. When compared to the previous two Department studies in the 1990s and 1950s, corbina ranked second and ninth, respectively, in abundance. The most recent study sampled over a wide range of tidal conditions and found that corbina were more abundant during lower, incoming tides. Corbina catches consisted of fish ranging in size from young-of-the-year to adult, and were dominated by smaller size classes. Annual average weight estimates remained relatively constant over the past several decades (MRFSS and CRFS data) with an average of 1.2 pounds (0.5 kilograms) per fish. Annual average length estimates varied more than weight, with an average fork length of 14 inches (35.6 centimeters).

Management Considerations

Current recreational take of California corbina appears to be at sustainable levels, just as it has also been in the past decades. The current sport fish regulations and the ban on commercial take of California corbina appear to be effective management measures and should be maintained.

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Further Reading

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California corbina recreational catch, 1980-2003					
Year	Number of fish	Year	Number of fish	Year	Number of fish
1980	35,926	1988	21,659	1996	17,989
1981	21,915	1989	17,654	1997	13,780
1982	33,864	1990	<i>no data</i>	1998	15,071
1983	43,788	1991	<i>no data</i>	1999	16,786
1984	36,476	1992	<i>no data</i>	2000	6,837
1985	29,457	1993	11,687	2001	14,322
1986	48,270	1994	15,989	2002	20,851
1987	52,823	1995	34,386	2003	2,467

Data Source: MRFSS data for all fishing modes and gear types combined. Data for 1990-1992 are not available.

California corbina recreational catch, 2004-2009	
Year	Number of fish
2004	21,857
2005	32,116
2006	37,810
2007	25,833
2008	5,868
2009	14,825

Data source: CRFS data, all fishing modes and gear types combined. Data for 2010-2011 are not available.